

# Tutorial: Anatomy of a network attack, network forensics, network attack and defense

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**Abstract:** This tutorial will look at the nature and structure of network attacks and the tools, actions and processes that can be used to identify and respond to such attacks. A brief overview examining the anatomy of an attack and the creation of botnets will be presented and the motivation that drives such on-line malicious activity, the type of tools that are used in modern attacks, who is behind these and the impact they have will be discussed. Identifying attack streams and understanding the nature of TCP/IP traffic will be discussed through the use of Wireshark, fprobe, nfsen and nfdump. Darknets and their operation and contribution to combating malicious network activity will be considered. As a practical, hands-on exercises, participants will be able to simulate a network attack and response scenario by trying to penetrate a remote network while at the same time protecting their own network from attack. This will be done using the tools and techniques discussed earlier and by remotely accessing either a virtual network topology or a real network running in the APNIC training lab.

## Abstracts

- Network Management and NOC Workshop  
Hervey Allen (NSRC), Phil Regnaud (NSRC), Chris Evans (Delta-Risk)
- VOIP Deployment Workshop  
Jonny Martin (PCH), Vicky Shrestha (PCH), Daniel Griggs (FX Networks)
- Network Security Workshop  
Damien Holloway (Juniper Networks), Kunjal Trivedi (Cisco), Merike Kaeo (Doubleshot Security)
- ISP Routing Workshop using IPv4 and IPv6  
Gaurab Raj Upadhaya(PCH), Amante Alvaran (APNIC), Shankar Vridhagiri
- Advanced Routing - BGP Multihoming with IPv4 and IPv6  
Philip Smith (Cisco), Mark Tinka (Global Transit)
- Toward The Internet 2.0  
Hiroshi Esaki, Ph.D.
- Advancing the Philippines' Internet Infrastructure  
William Torres, Ph.D.
- Integrating IP Wireless Sensor Networks  
Patrick Grossetete, Archrock
- Lessons Learnt from the Beijing Olympic Games Website Measurement  
Rocky K. C. Chang, The Hongkong Polytechnic University
- A technical demo and overview of .tel  
Jim Reid (Telnic)
- BGP IN 2008 - what's changed  
Geoff Huston (APNIC)
- IPv6 Traffic levels on Hurricane Electric's backbone  
Martin Levy (Hurricane Electric)
- JANET's 40Gbps backbone  
Rob Evans (JANET)
- From IPv4 only to v4/v6 Dual Stack  
Shin Miyakawa (NTT)
- How to Keep CGNs from Breaking the Internet  
Randy Bush (IIJ)
- IPv6 Deployment at IIJ  
Yoshinobu Matsuzaki (IIJ)

- Session aware NAT  
David Miles (Alcatel-Lucent)
- IANA and DNSSEC at the root  
Richard Lamb (IANA)
- IPv6 at Google: lessons learned, state of the art, and the road to deployment  
Lorenzo Colitti(Google)
- Euro-IX update  
Serge Radovic (Euro-IX)
- IPv6 at Monash University  
John Mann(Monash University)
- What can IXPs do for IPv4/IPv6 route exchange?  
Takabayashi Takejiro (Japan Internet Exchange Co., Ltd.) and Mawatari Masataka (Co-author)
- What can IXPs do about IPv4 exhaustion?  
MAWATARI Masataka (Japan Internet Exchange Co., Ltd.) and TAKABAYASHI Takejiro
- DNS-OARC's Open DNSSEC Validating Resolver  
Duane Wessels(DNS-OARC)
- AMS-IX Update  
Cara Mascini(AMS-IX)
- DNSSEC in 6 minutes  
Joao Damas (ISC)
- NIXI - Internet Exchanges in India  
Amitabh Singhal,NIXI
- IPv6 - IPv4 Co-Existence: IETF Report  
Jari Arkko, Ericsson Research, IETF
- Rogue DNS servers - a case study  
Feike Hacquebord,Trend Micro
- Building a very large scale compute system for organizing the worlds information and making it universally accessible  
Vijay Gill
- Mobile Backhaul Architecture Options  
Rishi Mehta ,Redback Networks
- Membership Development  
Tomas Marsalek, NIX.CZ
- Broadband Forum v6 Home Networks  
David Miles, Alcatel-Lucent
- BGP Routing Scalability Considerations  
Danny McPherson,Arbor Networks, Inc. Co-author: Shane Amante, Lixia Zhang
- 2008 Infrastructure Security Report  
Danny McPherson,Arbor Networks, Inc.
- 32-bit ASNs  
Chris Malayter, Switch&Data, Co-author: Greg Hankins , Force10 Networks
- The Internet Regulatory Environment in Saudi Arabia  
Dr. Ibraheem S. Al-Furaih (CITC)
- Tutorial: Introduction to IPv6  
Kurtis Lindqvist (NetNod)
- Tutorial: BGP Multihoming Techniques  
Philip Smith (Cisco)
- Tutorial: BGP Techniques for Service Providers  
Philip Smith (Cisco)
- Tutorial: Troubleshooting BGP  
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- Tutorial: Network Core Infrastructure - Best Practices

Yusuf Bhajji (Cisco)

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Phil Regnauld and Hervey Allen (Network Startup Resource Center)
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Paresh Khatri (Alcatel-Lucent)
- Tutorial: IPv6 Deployment  
Mark Tinka (Global Transit International)
- Tutorial: IS-IS Deployment (Dual-Stack)  
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